

REMARKS

United States Serial No. 10/526,953 was filed on November 30, 2005. The application is subject to a rejection of claims 1-20. In view of the amendments and remarks set forth herein, Applicants respectfully request that the rejections of claims 1-20 be withdrawn and that a formal Notice of Allowance be issued with respect to claims 1-4 and 21-27.

Specification

The title of the present application has been objected to as not descriptive. The title has been amended, and Applicants respectfully request that this objection be withdrawn.

Claim Amendments

Claim 1 has been amended to reflect the subject matter which has been granted in the corresponding European patent (EP 1 556 583). Support for this amendment can be found throughout the specification, but particularly at page 1, lines 6-20.

Claims 5-20 have been canceled without prejudice in the interest of compact prosecution.

Claims 21-27 have been added in order to clarify the scope of the claimed subject matter in the present application. Support for claim 21 can be found in the specification at page 2, lines 16-18. Support for claim 22 can be found in the specification at page 2, lines 24-25. Support for claim 23 can be found in the specification at page 6, lines 10-11. Support for claim 24 can be found in the specification at page 5, lines 6-18. Support for claim 25 can be found in the specification at page 6, lines 1-3. Support for claim 26 can be found in the specification at page 1, lines 26-28 and claim 3. Support for claim 27 can be found in the specification at page 5, lines 6-18.

Applicants have previously paid for three independent and twenty total claims. After entry of this Response, one independent and eleven total claims remain pending. No excess claim fee is due with the filing of this Response.

Claim Objections

Claims 9-11, 13, 14 and 18-19 have been objected to under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 9-11, 13, 14 and 18-19 have been canceled. Therefore, Applicants respectfully submit that this claim objection is rendered moot and request that it be withdrawn.

35 U.S.C. § 112

Claim 5 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. Claim 5 has been canceled. Therefore, Applicants respectfully submit that the 35 U.S.C. § 112 rejection of claim 5 is rendered moot and request that it be withdrawn.

35 U.S.C. § 102

Claims 1-4, 7-11 and 15-20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by WO 99/18330 to Ellenberger ("Ellenberger"). As claims 7-11 and 15-20 have been canceled, Applicants respectfully submit that the 35 U.S.C. § 102 rejection of these claims is rendered moot, and request that it be withdrawn.

Claim 1, as presently amended, recites a method of boring, and clearly indicates that hard rock is bored and that a corresponding special tunnel boring machine, for boring hard rock, is used.

Ellenberger discloses the boring of relatively soft material by means of a shield boring tunnel machine. In such shield boring tunneling machines, boring liquids or foams are used because they facilitate the removal of the material being bored. The construction of shield tunneling boring machines, which are only used for boring of tunnels in non-rock strata, is substantially different from the construction of hard rock tunnel boring machines. Such hard

rock tunnel boring machines contain cutting elements constructed from hardened steel discs which protrude from the cutting head. In contrast, shield boring tunneling machine does not need such hardened steel discs because the material through which it bores is much softer.

Applicants respectfully submit that Ellenberger does not disclose a method of boring rock by means of a tunnel boring machine comprising hardened steel discs which protrude from the cutting head, wherein wear in the cutting head is reduced by adding at the cutting head a foamed aqueous liquid composition, which comprises a foaming agent and a lubricant, the lubricant being selected from high molecular weight polyethylene oxides. Applicants respectfully request the withdrawal of the 35 U.S.C. § 102(b) rejection of claim 1.

MPEP § 2131 states that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 . . . (Fed. Cir. 1987).” MPEP at 2100-67. Claims 2-4 depend ultimately from claim 1, and therefore contain the respective elements or features of claim 1 not disclosed in Ellenberger. Applicants therefore respectfully request the withdrawal of the 35 U.S.C. § 102(b) rejection of claims 2-4.

Applicants note that, although claim 20 has been canceled, new claim 23 represents essentially the same subject matter. With regard to claim 20, and thus to claim 23, however, it is acknowledged in the Office Action that Ellenberger does not explicitly teach the method where said concentrate is added in an amount of about 0.5 to about 10 kg/m³ of rock removed. However, the Office Action alleges that one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation the amount of concentrate to obtain the desired friction and thereby lengthen the life of the drill head.

Applicants respectfully submit that, as discussed above, Ellenberger does not disclose a method of boring hard rock, and therefore there is no suggestion or motivation (as discussed in more detail below) to use the composition of Ellenberger for boring hard rock, much less the optimization of the amount of compound to be used per amount of hard rock to be bored.

35 U.S.C. § 103

Claims 5, 6 and 12-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ellenberger. As claims 5, 6 and 12-14 have been canceled, Applicants respectfully submit that this rejection is rendered moot and request that it be withdrawn.

Applicants wish to note that, as discussed above, Ellenberger does not disclose the elements of claim 1 as presently amended; Ellenberger also does not suggest the elements of claim 1. A person of skill in the art would not be motivated to use a boring liquid or foam which is generally used for boring soft materials, as in Ellenberger, in the field of hard rock boring, because in the case of hard rock boring, the removal of the bored material is not performed in the same manner. Therefore, the use of the boring liquids or foams which facilitate the removal of the soft materials in soft material boring operations would not be considered functional to facilitate the removal of the hard materials using hard rock boring techniques. Thus, Ellenberger does not suggest, to one of skill in the art, the elements of claim 1 as presently amended.

Further, since the elements of claim 1 are not suggested by Ellenberger for the above reasons, claims 2-4 and 21-27, which depend from claim 1, are also not suggested. *See In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). ("If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious." MPEP § 2143.03 at page 2100-142.)

Applicants wish to note that the Office has acknowledged that Ellenberger does not disclose or suggest the use of nonionic surfactants. Applicants therefore respectfully submit that claim 21, which positively recites that at least one surfactant is nonionic, and claims 26 and 27, which utilize only nonionic surfactants, and which are ultimately directed to the method of claim 1, are neither taught nor suggested by Ellenberger.

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Docket No.: MBZ-0502

Applicants: Herbert EGLI, et al.

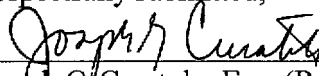
Response to Office Action mailed: October 3, 2008

Response Filed: January 5, 2008

In view of the above amendments and remarks, Applicants respectfully request reconsideration of the application and withdrawal of the objection to the title, and the objections to and 35 U.S.C. §§ 112, 102 and 103 rejections of claims 1-20, and request the issuance of a formal Notice of Allowance with respect to claims 1-4 and 21-27.

Should the Examiner have any questions about the above remarks, the undersigned attorney would welcome a telephone call.

Respectfully submitted,



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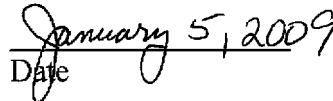
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